IN THE CLAIMS:

Claim 20 was previously cancelled. None of the claims have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as previously amended.

Listing of Claims:

1. (Previously presented) A semiconductor device structure comprising an oxidation barrier, the oxidation barrier comprising a doped metal or doped metal alloy layer co-deposited by electroless plating.

2. (Previously presented) The semiconductor device structure of claim 1, wherein the doped metal or the doped metal alloy layer comprises at least one of platinum, rhodium, iridium, ruthenium, and palladium.

3. (Previously presented) The semiconductor device structure of claim 1, wherein the doped metal or doped metal alloy layer is boron doped.

4. (Previously presented) The semiconductor device structure of claim 3, wherein boron comprises about 0.1% to about 5.0% by weight of the doped metal or doped metal alloy layer.

5. (Previously presented) The semiconductor device structure of claim 1, wherein the doped metal or doped metal alloy layer is phosphorus-doped.

6. (Previously presented) The semiconductor device structure of claim 1, wherein the doped metal or doped metal alloy layer has a thickness of about 500Å.

7. (Previously presented) The semiconductor device structure of claim 1, wherein the doped metal or doped metal alloy layer has a thickness of about 100Å.

8. (Original) A method of forming an oxidation barrier comprising co-depositing a doped metal or doped metal alloy layer by electroless plating over a semiconductor substrate.

9. (Previously presented) The method of claim 8, further comprising forming a conductive structure over the oxidation barrier.

10. (Previously presented) The method of claim 8, further comprising forming a dielectric layer over the oxidation barrier.

11. (Previously presented) The method of claim 8, wherein co-depositing comprises introducing at least part of the semiconductor substrate into an aqueous metal solution comprising at least one metal salt and at least one reducing agent.

12. (Previously presented) The method of claim 8, wherein co-depositing comprises introducing at least part of the semiconductor substrate into an aqueous metal solution comprising at least one reducing agent and at least one of platinum, rhodium, iridium, ruthenium, and palladium.

13. (Previously presented) The method of claim 8, wherein co-depositing comprises introducing at least part of the semiconductor substrate into an aqueous metal solution comprising at least one metal salt and at least one of dimethylaminoborane, borohydride, and hydrazine.

14. (Previously presented) The method of claim 8, wherein co-depositing comprises introducing at least part of the semiconductor substrate into an aqueous metal solution comprising at least one metal salt and at least one substance that alters a grain structure of a metal of the at least one metal salt.

15. (Previously presented) The method of claim 8, wherein co-depositing comprises forming an oxidation barrier comprising a boron-doped metal.

16. (Previously presented) The method of claim 8, wherein co-depositing comprises forming an oxidation barrier comprising a phosphorous-doped metal.

17. (Previously presented) The method of claim 8, wherein co-depositing comprises forming an oxidation barrier adjacent a conductive layer on the semiconductor substrate.

18. (Previously presented) An electroless plating bath for depositing an oxidation barrier on a semiconductor device structure, the bath comprising at least one metal salt and at least one of dimethylamineborane and potassium borohydride.

19. (Previously presented) The electroless plating bath of claim 18, wherein the at least one metal salt comprises a salt of at least one of platinum, rhodium, iridium, ruthenium, and palladium.

20. (Cancelled)

21. (Original) The electroless plating bath of claim 18, further comprising a complexing agent.